INTRODUCTION

The trails and greenways movement is, arguably, the premier open space preservation and recreational opportunity success of the past ten years. As one example of this progress, the development of rails-to-trails project mileage has increased from 1,738 miles nationwide in 1989 to 10,719 miles in May of 1999. In Iowa, more than 1,000 miles of trails of many types have been built in the last 10 years. This success reflects the enormous popularity and political acceptance of trails for both recreation and transportation.

TRAIL USE, TRENDS, AND USER PROFILES

Surveys conducted throughout the country indicate the heavy use of trails and the many ways in which people use trails for both recreation and transportation. Surveys also show a high level of public support for trails and paths, and a willingness to pay for these facilities.

The 1990 *Iowa Statewide Recreational Trails Plan* found high levels of participation in trail activities - 90 percent of respondents indicated that they had used local trails for walking an average of 90 times during 1988. High levels of support were expressed for continued trail development near home, especially multi-use trails for bicycling and pedestrian activities. Interest in and support for trails in Iowa are similar to patterns in other parts of the country.

Trails for All Americans, a report of the National Trails Agenda Project, estimates that 155 million people walk for pleasure and 93 million bicycle. *Pathways for People*,[i] a 1991 poll conducted for Rodale Press, interviewed 1,255 people in randomly selected households throughout the continental United States. During the year preceding the poll, 46 percent (representing 82 million adults) had ridden a bicycle and 73 percent (130 million) had walked outdoors for

exercise. Most walking and bicycling takes place on streets and sidewalks, but the majority of respondents indicated they would walk or bicycle more if safe paths, walkways and bike lanes were provided.

User counts have been conducted on a number of trails throughout the country. Many trails have thousands of daily users. Estimates of daily use levels for extremely popular trails, such as the Burke-Gilman Trail in Seattle, reach as high as four to five thousand. The East Bay Bicycle Facility in Rhode Island has as many as 8,000 daily users per weekend day, which is four times greater than predicted.[ii] Many successful trails have far more modest use levels, but few fail to show respectable use that generally increases over time. A study of the Heartland State Trail in Minnesota found a 16 percent increase in use levels from 1987 to 1989. Currently, the Heartland Trail sees more than 47,000 users per year, while the Raccoon River Valley Trail (RRVT) in Iowa sees more than 48,000 annual users, and the Elroy Sparta Trail in Wisconsin hosts approximately 60,000 users per year.

A study of three rail-trails for the National Park Service compares Iowa's Heritage Trail, the St. Mark's Trail in Tallahassee, Florida, and the Lafayette/Moraga Trail near San Francisco. User data, adjacent landowner perceptions, and the economic impacts of the trails are examined. This study found the following use trends:

- Annual use levels for all trails are in the hundred thousands.
- Bicycling and walking are the major trail uses.
- Male/female ratios are roughly equivalent.
- Incomes and educational levels are above average.
- The number of trail visits per year varies substantially with trail location in relation to place of residence.
- The most highly ranked trail benefits or values for trail users include aesthetic beauty and natural resource preservation.

These findings are consistent with the socio-demographic findings of many trail surveys. The following sections discuss the above findings in more detail.

Bicycling and Walking

The vast majority of trail use is on foot and on bicycles. The National Park Service (NPS) study found that the majority use for the Heritage (65 percent) and St. Mark's (81 percent) Trails is bicycling. However, walking (63 percent) and jogging (12 percent) are the predominant uses for the Lafayette/Moraga Trail. This trail is a relatively short suburban trail that is heavily used by residents who live nearby. The median distance of the trail from home is 1.5 miles versus 7 and 8 miles for the other trails.[iii] Bicycle use predominates on most of the multi-use trails for which counts are available.

It is, however, important to note that use counts differ from results of phone or letter surveys on trail activity participation rates. State trail use surveys in Colorado, North Carolina and Iowa find that walking is cited as the most frequent trail activity by most respondents.

A 1998 survey in North Carolina describes the overall annual participation rates for various trail activities for the entire sample (not just trail users). Walking for pleasure is by far the trail activity participated in most frequently, with an average of 7.62 trips per person for the previous 12 months. The frequency of bicycling is found to be an average of 1.78 trips. A further finding is that 23.7 percent of the respondents participated in walking for pleasure versus 7.3 who bicycled.[iv] Similarly, a Colorado survey found that among respondents to a survey of 600 registered voters, the most popular trail activities were walking (mentioned by 40 percent of respondents), hiking (36 percent), and bicycling (29 percent).[v]

The 1989 State of Iowa Recreational Trails Usage Study, which was performed as a part of the 1990 plan, found that the trail activity most often undertaken by survey respondents is, "walking near home for recreation and exercise." The next two most often identified activities are "walking at a …place away from home," and, "bicycling near home." When asked about the frequency of use, walking near home is the most frequent trail activity, but bicycling near home and horseback riding near home are more frequent activities than walking at a location farther away from home.[vi]

A survey of users of the Wabash Trace Nature Trail was conducted by the Iowa Natural Heritage Foundation in the summer of 1999.[vii] It looked at use patterns, user satisfaction and the economic impact of the trail. Nine out of 10 respondents indicated that their primary activity on the trail was bicycling. Small percentages of users participated in hiking (6 percent), running or jogging (3 percent) and horseback riding or other activities (2 percent).

—— *Male/Female Ratio*

According to various studies, males tend to ride bicycles more than females. Because bicycling as an activity dominates many multi-use trails, males tend to outnumber females on such facilities. When trail activities are assessed more generally, however, as in state surveys and wilderness trail surveys, male and female participation rates are roughly even. The North Carolina State survey found that recent trail users were 53 percent male and 47 percent female. In Iowa, females slightly outnumber males in overall trail participation. On the other hand, the more "extreme" sport of mountain bicycling has an 80 percent/20 percent split in male-to-female participation.[viii]

—INCOME AND EDUCATION

Incomes are greater than average, as are education levels, among trail users. The North Carolina State survey found that "households earning, $75,000 to $99,999 are most likely to have used trails over the last 12 months." The surveyed sample is also well educated. Thirty-one percent have a college degree and 88 percent are high school graduates. The 1989 Iowa trails survey also concluded that heavy trail users tend to have above average incomes. A user study of the Raccoon River Valley Trail (RRVT), concluded that the "typical trail user … has a college education and earns over $45,000 a year." Those surveyed on the Wabash Trace Nature Trail also had higher than average incomes. More than half of the trail users report annual household incomes above $50,000.

—TRAIL LOCATION AND FREQUENCY OF VISITS

The frequency of trail visits varies greatly by the location of the trail in relationship to the user's residence. The RRVT study in Iowa found that trail visits are much more frequent for those living near the trail, (in Dallas and Guthrie Counties). The Colorado survey on attitudes toward trails found relatively high frequency of use for all trail types, but local trails are used most often. One-third of the public reported that they or a family member use local trails at least 50 times in a typical year in that survey. The frequency of trail use identified by the Wabash Trace Nature Trail survey is high. Iowa respondents reported visiting the trail an average of 37 times per year. Nonresidents said that they visit the trail an average of 17 times per year. In the 1989 State of Iowa Recreational Trails Usage Study, Iowans expressed a desire for more trails closer to home. Participants in the OHV User Survey undertaken as part of *Iowa Trails 2000* expressed a similar desire (see Appendix D).

Public Investment in Trails

A great deal of support is expressed in several surveys for the investment of public dollars in trails. Respondents to a Colorado survey support spending for trails. Sixty percent gave high spending priority to a wide range of activities, including wildlife habitat preservation; maintaining existing trails; improving access for persons with disabilities; and developing youth involvement and educational programs. A survey of local residents in Naperville, Illinois, revealed support for a tax increase for building and operating trails, although such an increase was not supported for the development of other recreational facilities.[ix] In Iowa, the RRVT study indicated a strong willingness among users to pay higher user fees, especially for habitat protection and trail expansion.

User Benefits/Values: National and State Surveys

The differences in structure of various surveys can make comparison of results difficult, especially for value-laden responses. Two values, however, appear as highly rated qualities of the trail experience in many of the surveys that have been discussed. These values are aesthetic beauty and natural area preservation.

The qualities rated most highly by respondents to the three surveys examined in the NPS study are:

- Health and fitness.
- Aesthetic beauty.
- Preserving open space.

In the Colorado survey, the most important reasons for using trails include:

- To see beautiful scenery.
- To enjoy nature.
- To have fun with family and friends.

Sixty-nine percent of respondents would support limits on trail use if natural habitat was being destroyed.

In the 1989 Iowa statewide survey some different elements of the trail experience contribute most to the trail user's enjoyment:

- The trail traverses a variety of landscapes.
- The presence of water.
- The trail corridor is separate from the roadway.
- Historical markers are present.

More than 90 percent of those surveyed about Iowa's RRVT associated five positive effects with the trail:

- Availability of recreational opportunities.
- Positive image for Dallas County.
- Increased visitation.
- Community pride.
- Improvements to the local economy.

However, when asked how trail management investment should be handled, the sample population thought that more money should be spent on the following items:

- Planting trees.
- Wildlife restoration.
- Protection of wildlife corridors and habitat restoration.
- Reducing soil erosion.

Off-highway vehicle enthusiasts indicate very similar responses to questions regarding experiences desired on trail facilities. Important factors include:

- Scenery and wooded areas.
- Proximity to water features.
- Variation in topography and soils.
- Availability of trail connections between riding areas.

The results of these surveys give an indication of the reasons for increased interest in trail development by communities and the general public. This interest is primarily due to the benefits that trails provide.

BENEFITS OF TRAILS

Trails are seeing immense popularity because of the many benefits they offer to a community. Aside from pure recreational opportunity, trails offer the following benefits:

- Health, fitness, and quality of life.
- Transportation.
- Open space and natural area preservation and enhancement.
- Economic development.
- User safety.

—HEALTH, FITNESS, AND QUALITY OF LIFE

Active recreation, in any form, is a proven health benefit. Trails allow people the opportunity to recreate in a variety of ways, depending on their abilities and preferences. A recent study stated that sedentary lifestyle is the second greatest health threat to Americans. Lack of physical activity and poor diet are identified in a recent American Medical Association study as the second leading cause of death (after smoking), in the United States.[x] Americans, including children, are getting fatter every decade. Surprisingly, the amount of recreational exercise has stayed constant over the past 25 years. The change in activity seems to be attributable to a lack of everyday routine exercise, especially walking and physically active play. Children no longer walk or bicycle to school, and engage in much more passive recreation. Adults use motor vehicles for almost every trip and work at sedentary jobs. The Center for Disease Control (CDC) states that while highly aerobic exercise offers additional health benefits for those who do it, the most significant loss in health is a result of the reduction, over the past three decades, in activities like walking to the store, to work or to school. Small incremental changes, involving moderate physical activity such as walking and bicycling, can make the biggest difference between a healthy and a hazardous lifestyle.

Trails are also commonly seen as increasing the quality of life for nearby residents. Though trails may meet opposition during implementation based on fears of vandalism and crime, these concerns are virtually never realized. Neighborhoods with trail connections are desirable places to live, and cities with high-quality trail networks are attracting new businesses and residents. The quality of life of people with access to trails is based both on health and fitness, as discussed above, and on their ability to step outdoors and appreciate scenic beauty.

—— *TRANSPORTATION*

The United States Department of Transportation adopted a new transportation policy in 1990 designed to encourage the recognition of bicycling and walking as viable transportation modes. As a result of this new policy, the National Bicycling and Walking Study was completed in 1994. It contained two significant goals: to double the percentage of total trips made by bicycling and walking in the United States (to 15.8 percent); and to simultaneously reduce by 10 percent the number of fatal bicycle and pedestrian accidents.

This commitment to, essentially, the construction and promotion of trails as transportation routes was in response to some growing concerns. The increasing number of automobiles on the nation's roadways causes congestion, especially in urban areas, where non-motorized transportation modes are most viable. In addition, an increase in the number of trips made by pedestrians and bicycles helps to improve air quality, also primarily in urban areas.

In order to increase non-motorized trips, it is important to increase safety. In many cases, trails accomplish this goal by allowing trail users exclusive rights-of-way free from motor vehicles. These trails, therefore, become viable and safe transportation corridors.

While the federal government has focused on the recognition of bicycling and walking as important transportation modes, other users may also reap the transportation benefits of trails. Whatever the use mode, the primary issue to consider when designing trails for transportation is connection. If trails connect residential areas, recreational areas, commercial areas, and work centers, they can offer transportation choices to users. Trails used for transportation are most

effective in urban areas, where trips are shorter. For this reason, *Iowa Trails 2000* includes a handbook for local communities on pedestrian and bicycle planning. This guide offers assistance in capitalizing on the transportation benefits of trails.

Open Space and Natural Area Preservation and Enhancement

The idea of trails as "greenways" is an important concept to many Iowans. In numerous local and national user surveys, trail users state their commitment to protecting natural resources and their desire to experience trails with natural and scenic value. A greenway is a linear corridor that serves primarily an ecological purpose. Oftentimes, this natural systems approach is coupled with, and solidified by, a recreational amenity such as a trail. In a true greenway, the trail element is just one component of an ecological corridor that may connect existing natural areas within parks, preserves, and other greenways.

The trail, however, is important to the greenway, since it can provide an impetus for preservation of the corridor. By implementing a continuous recreational corridor, a community can connect its existing green spaces and enhance the linear green space between them.

Greenways are considered in the statewide trails vision of this document (see Chapter 3). By establishing trails as both recreational and ecological corridors, the amount and quality of open space and natural areas in Iowa can be increased.

Economic Development

Trail users spend money. Such expenditures may range from snacks or drinks to bicycle repair or purchase to overnight stays. Communities that serve as trailheads are poised to take advantage of this economic inflow. A study for the National Park Service undertaken in 1992 estimated that trail users spend between $4 and $11 per day, depending on trail location and spending opportunities. This can equate to between $1.2 and $1.8 million for one trail for one year. The Wabash Trace Nature Trail Survey found that the average spending per trail user party per day was $28.65. (This broke down to $10.57 per person.) Trail users also indicated that they had spent an average of $819 for durable equipment (such as bicycles) and trail gear purchased specifically for use on the Wabash Trace.

Trails can give people a reason to visit a town, and may spur other benefits - such as downtown revitalization, an increase in property values, and attraction of additional businesses - whether they serve the trail or not. In order to assist communities in capturing the economic inflow associated with trails, *Iowa Trails 2000* includes a handbook on trail-based economic development programs.

User Safety

Trails designed for specific recreational or transportation modes are inherently safer than combining recreation with existing vehicular routes. Trails offer dedicated travel routes for walkers, bicyclists, equestrians, OHV enthusiasts, and snowmobilers that often are separated from roadways. One of the greatest hazards to trail users is conflicts with vehicular traffic, and trails can reduce such conflicts, thereby increasing user safety.

TRAIL NEEDS

Although Iowa has a high level of participation in trail activities, the level of satisfaction with trails is low. According to the 1989 State of Iowa Recreational Trails Usage Study, just 31 percent of respondents indicated that they were "very satisfied" with Iowa's trail resources. Components of a relatively lower level of satisfaction in Iowa are a perceived need for more trails close to population centers, and the desire of Iowans to do more bicycling on trails. In addition, 100 percent of the respondents to the Iowa OHV User Survey performed as a part of *Iowa Trails 2000* (see Appendix D), supported the creation of OHV trails in Iowa.

While Iowans might experience a lack of available trails, they also express a high level of satisfaction with particular trails. Ninety-eight percent of respondents to the RRVT survey agreed that they would visit the trail again, and 99 percent agreed that they thoroughly enjoyed their visit.

Since the first Iowa Statewide Recreational Trails Plan in 1990, approximately 1,180 miles of trails have been built as part of the state system, raising the total of that system to 1,580 miles. Additional trails within Department of Natural Resource land total more than 650 miles, bringing the total trail mileage in Iowa to more than 2,200 miles. Iowa has historically been a leader in trail development, but, according to residents, there is more work to be done.

According to national trends and the 1989 Iowa Trails Usage Study, residents have expressed several specific trail needs:

- Additional high-quality, multi-use trails similar to the Raccoon River Valley Trail or the Cedar Valley Nature Trail.

- Additional trails "close to home." Trails should connect communities, parks, nature areas, and other natural and cultural resources.

- Use of trails as a means of increasing public awareness of the values of natural corridors and the need for protecting, enhancing, and preserving natural areas.

- Flexibility in trail design to allow for a variety of use modes.

Iowa Trails 2000 charts the course for the next phase of trail development by recognizing the benefits of trails and the needs of Iowans.

[i] Louis Harris and Associates. Pathways for People. Rodale Press, Inc. Emmaus, PA. 1992.

[ii] University of North Carolina Highway Safety Research Center, A Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States. Report No. FHWA-PD-95-009. Prepared for the Federal Highway Administration, Washington, DC, 1995.

[iii] Moore, Roger L., Graefe, Alan R., Gitelson, Richard R., Porter, Elizabeth. "The Impacts of Rail-Trails: A Study of the Users and Property Owners from Three Trails," for the Rivers, Trails, and Conservation Assistance Program, National Park Service, Washington, DC, 1992.

[iv] "Results of North Carolina Comprehensive Trail and Greenway Survey," a summary found at the American Trails Website: www.outdoorlink.com/amtrails/resources/planning/PlanNCSurvey.html.

[v] "Results of Colorado Statewide Public Survey on Attitudes Toward Trails," a summary found at the American Trails website: www.outdoorlink.com/amtrails/resources/planning/CoplanPublicSurvey.html.

[vi] Barton-Aschman Associates, Inc. (in association with Dunbar/Jones Partnership, Kirkham, Michael & Associates, Inc.), and Zimmerman, Laurent & Richardson, Inc. Iowa Statewide Recreational Trails Plan. Prepared for the Iowa Department of Transportation. 1990.

[vii] Iowa Natural Heritage Foundation, "Wabash Trace Nature Trail User Survey, Volume 1 – Summary of Findings," June – July, 1999.

[viii] Bjorkman, Alan W. Off-Road Bicycle and Hiking Trail Users' Interactions: A Report to the Wisconsin Natural Resources Board. Wisconsin Department of Natural Resources, Bureau of Research. Madison, WI, 1996.

[ix] Barton-Aschman Associates, Inc. (in association with Suzan Anderson Pinsof). City of Naperville Bicycle and Pedestrian Plan, developed for the City of Naperville. Naperville, IL, 1997.

[x] McGinnis, J.M. and W. Foege, "Actual Causes of Death in the United States," Journal of the American Medical Association, 279(6): 440-444, 1993.